

DRAFT WATER QUALITY MANAGEMENT PLAN

For compliance with State Water Resources Control Board

Water Quality Order Number 2003-0005-DWQ
(NPDES Permit No. CAS000004)

for

Agincourt Solar Site

Submitted by the Project Applicant:

Agincourt Solar LLC
P.O. Box 31159
Santa Barbara, CA 93130

Prepared for:



WDG Capital Partners
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Santa Barbara, CA 93130
APNs 0449-641-27 and 0449-641-04

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June 8, 2012

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Project Site Information

Name of Project: Agincourt Solar Site

Project Location: The proposed project is situated in the western Mojave Desert in the southern Lucerne Valley region of San Bernardino County. The site is about 5.5 miles southeast of the Lucerne Valley community. The primary access point to the project site is Camp Rock Road, which runs along the eastern boundary of the site. Camp Rock Road intersects State Route (SR) 18, approximately 1.7 miles south of the proposed project site. The proposed project site includes the following APNs:

- 0449-61-04 (40 acres, NE/4 of NW/4, Section 34, Township 4N, Range 1E)
 - 0449-641-27 (39.2 acres, S/2 of N/2 of NE/4, Section 34, Township 4N, Range 1E, excepting County 50-foot road easement)
-

Size of Significant Re-Development on an Already Developed Site (in feet²): N/A

Size of New Development (in feet²): 3,449,952 square feet

Number of Home Subdivisions: N/A

SIC Codes: 4931

Erosive Site Conditions?: None

Natural Slope More Than 25%?: No

Determination of Project Category

Check the appropriate project category below:

Check below	Categories
X	1. New development and/or redevelopment of any commercial or industrial property that creates, adds and/or replaces 100,000 square feet or more of impervious surface. Redevelopment is any land-disturbing activity that results in the creation, addition or replacement of exterior impervious surface area on a previously developed site
	2. New development and/or redevelopment of Automotive repair shops (with SIC codes 5013, 5014, 5541, 7532 - 7534, 7536 - 7539) that creates, adds and/or replaces 5,000 square feet or more of impervious surface.
	3. New development and/or redevelopment of a Retail Gasoline Outlet (RGOs) that creates, adds and/or replaces 5,000 square feet or more of impervious surface.
	4. New development and/or redevelopment of a Restaurant that creates and/or replaces 5,000 square feet or more of impervious surface
	5. New development and/or redevelopment of an uncovered parking lot that creates, adds and/or replaces 5,000 square feet or more of impervious surface, or provides 25 parking spaces exposed to storm water runoff. Parking lot is defined as land area or facility for the temporary storage of motor vehicles.
	6. New development and/or redevelopment of a Single Family Hillside residences.
	7. New development and/or redevelopment project that creates a home subdivision comprised of 10 or more housing units. This category includes developments on public or private land that fall under the planning and building authority of the County.
	8. The project does not fall into any of the categories described above. It is therefore defined as a Non-Category Project. NOTE: <i>Emergency public safety projects in any of the above-listed categories shall be excluded from the WQMP requirement, if the delay caused due to the WQMP requirement compromises public safety, public health, and / or environmental protection</i>

SECTION 1

Introduction and Project Description

1.1. Project Information

The project owner and address is:

Agincourt Solar, LLC
P.O. Box 31159
Santa Barbara, CA 93130

1.2. Permits

Permits required for this project include:

- Conditional Use Permit
- Tree Removal Permit
- Grading Permit
- Streambed Alteration Agreement for CDFG
- Notice of Intent to Comply with the NPDES Construction General Permit

1.3. Project Description

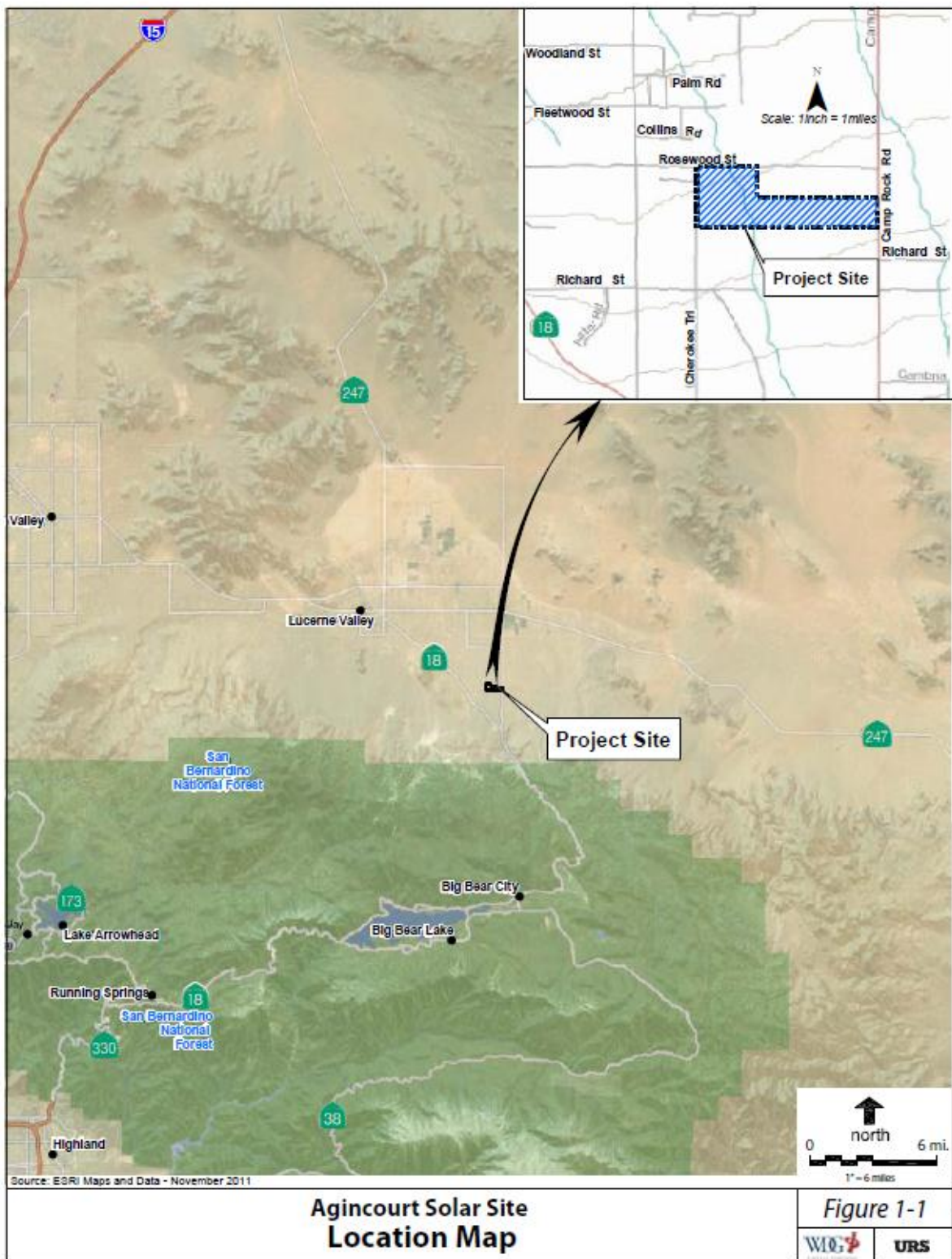
The proposed Agincourt Solar (Project) will be an unmanned facility that will provide solar photovoltaic (PV) power to serve the electrical load requirements of California. The Project would generate approximately 10 megawatts (MW) of alternating current (AC) PV modules on approximately 59 acres of the 79.2-acre site.

The proposed Project's substation will connect with the existing Southern California Edison (SCE) 33-kilovolt (kV) transmission line that runs north-south along Camp Rock Road (adjacent to the Project's eastern boundary). No new off-site transmission line is proposed. The electricity produced by the Project will be marketed to power buyers through a long-term power purchase agreement.

The Project is designed to have a useful life of approximately 20 to 30 years, although the life span could be extended by upgrades and refurbishments. In the event that the solar project is decommissioned, the facility would be removed and the site prepared for subsequent land use.

The location of the Project site is shown on Figure 1-1.

Figure 1-1 –Site Location Map



1.4. Site Description

The Project site is located in the southern Lucerne Valley region of San Bernardino County. It is about 5.5 miles southeast of the Lucerne Valley community. The proposed Project site is located within the Lucerne Valley groundwater basin. This watershed is surrounded by large mountain ranges including Ord, Rodman and Stoddard Mountains to the north, the Granite Mountains in the west, Fry and Cougar Buttes Mountains to the east, and the large San Bernardino Mountains to the south.

Figure 1-2 shows the project site location within the Lucerne Valley groundwater basin. The Lucerne Valley groundwater basin is considered a closed basin, with elevations of 2,848 feet in Lucerne Dry Lake to 8,248 feet in the San Bernardino Mountains. The watershed generally slopes northwesterly with an overall slope of approximately 14 percent (ft. /ft.). The total watershed area is 148,000 acres and has an annual rainfall of 4 to 6 inches in the lower part of the valley, and 6 to 8 inches in the upper part of the valley¹. The primary vegetation at the site consists of Creosote bush-white burr sage scrub and Joshua tree.

The shallow aquifer has high nitrate and Total Dissolved Solids (TDS) concentrations associated with agricultural irrigation².

¹ California's Groundwater Bulletin 118

² Blazevic, M., Laton, W.R., and Foster, J. Geologic Insight to Lucerne Valley Groundwater Basin

Figure 1-2 – Project Site Location with in Colorado River RWQCB



SECTION 2

Pollutants of concern and hydrologic conditions of concern

2.1 Pollutants of Concern (NOT REQUIRED FOR NON-CATEGORY PROJECTS)

Table 2-1 in the WQMP Guidance manual was used to identify the potential pollutants expected to be generated by the development. The expected pollutants of concern at this unmanned facility include trash and debris and potentially oil and grease from maintenance vehicles visiting the site periodically for panel washing (several times per year) and general site maintenance (as needed).

Table 2-1: Pollutant of Concern Summary

Pollutant Type	Expected	Potential	Listed for Receiving Water
Bacteria / Virus (Pathogens)			
Metals			
Nutrients / Noxious Aquatic Plants			
Pesticides / PCB			
Organic Compounds			
Sediments / Turbidity / Total Suspended Solids / pH			
Trash & Debris		X	
Oxygen Demanding Substances			
Oil & Grease		X	
Other—specify pollutant(s):			

This project is not a typical commercial or industrial development. The project is designed to provide solar photovoltaic (PV) power to serve the electrical load requirements of California. The development of the proposed Project would require limited site grading, with limited impact to existing offsite drainage patterns and overall topography of the site, resulting in little or no import or export of earthen material. A total of approximately 150,000 cubic yards of cut-and-fill may be balanced onsite. Final drainage design will be completed following a detailed topographic site survey overlaid with proposed site development grading.

Based on visual observations during a site visit and the type of facility proposed, it is expected that the proposed solar panel construction would not significantly change the offsite runoff characteristics of the site during a major storm event. Because the imperviousness of the site would not be greatly changed as a result of the construction, the impact of increased rainfall runoff due to construction would be negligible. As noted above, the site design indicates that project construction would result in a minor (11 percent) increase in impervious surfaces at the site.

No off-site improvements are anticipated with the exception of the road leading to the site. Typical site access roads will be 25 feet wide to accommodate 75-foot turning radii in both directions. The proposed site entrance will include a 75-foot-long drive apron and roadway section paved with asphalt. The actual depth of roadway sections would be determined during final design based on anticipated loading and traffic indices. However, it is anticipated that the road base course would be a minimum of six inches thick. The top course thickness would be a minimum of two inches thick. (Note: dimensions are approximate until final design and approval by the County). Gravel pads or other track-out reduction measures at project construction site access points may be used to minimize dirt and mud deposits on public roads.

All runoff emanating from the site generally travels in a northwesterly direction towards Lucerne Dry Lake. Figure 2-1 shows the general drainage patterns from the Project site to Lucerne Dry Lake.

SECTION 3

Best Management Practice Selection Process

3.1 Site Design BMPs

The Site Design BMPs are indicated in Table 3-1. The table notes whether it will be used (yes/no) and describes how used, or, if not used, provides a justification/alternative.

Table 3-1: Site Design BMPs

1. Minimize Stormwater Runoff, Minimize Project's Impervious Footprint, and Conserve Natural Areas		
Maximize the permeable area. This can be achieved in various ways, including but not limited to, increasing building density (number of stories above or below ground) and developing land use regulations seeking to limit impervious surfaces.		
Yes X	No	
Describe actions taken or justification/alternative:		
The proposed solar site design minimizes the impervious footprint of the site by limiting impervious areas to approximately 11% of the total site area. Impervious areas primarily include gravel access roads, embedded pier solar panel foundations, a 200 by 200 foot switchgear area, a 20 by 30 foot unmanned communications enclosure, and approximately 10 inverters on small concrete pads, a switching station and concrete pad measuring approximately 200 by 200 foot, a communications enclosure on a concrete pad measuring approximately 20 by 30 feet, and a Conex box for equipment storage.		
Runoff from developed areas may be reduced by using alternative materials or surfaces with a lower Coefficient of Runoff, or "C-Factor".		
Yes X	No	
Describe actions taken or justification/alternative:		
The anticipated increase in impervious area represents only 11% of the entire site. Dirt or gravel roads would be used instead of asphalt roads.		
Conserve natural areas. This can be achieved by concentrating or clustering development on the least environmentally sensitive portions of a site while leaving the remaining land in a natural, undisturbed condition.		
Yes X	No	
Describe actions taken or justification/alternative:		
Natural areas and native vegetation along the major drainages would be protected from development.		
Construct walkways, trails, patios, overflow parking lots, alleys, driveways, low-traffic streets, and other low-traffic areas with open-jointed paving materials or permeable surfaces, such as pervious concrete,		

porous asphalt, unit pavers, and granular materials.		
Yes X	No	
Describe actions taken or justification/alternative: Access roads throughout the site will be graded dirt or gravel without asphalt paving.		
Construct streets, sidewalks, and parking lot aisles to the minimum widths necessary, provided that public safety and a pedestrian friendly environment are not compromised ³ . Incorporate landscaped buffer areas between sidewalks and streets.		
Yes X	No	
Describe actions taken or justification/alternative: Roadways have been limited to access roads necessary for maintenance and installation of solar units. Road widths have been limited to the minimum required to safely access the site.		
Reduce widths of street where off-street parking is available ⁴ .		
Yes	No	
Describe actions taken or justification/alternative: N/A		
Maximize canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought tolerant trees and large shrubs.		
Yes X	No	
Describe actions taken or justification/alternative: Native vegetation along major drainages would be protected and undeveloped.		
Other comparable site design options that are equally effective.		
Yes	No X	
Describe actions taken or justification/alternative: N/A		
Minimize the use of impervious surfaces, such as decorative concrete, in the landscape design.		
Yes	No X	

³ Sidewalk widths must still comply with Americans with Disabilities Act regulations and other life safety requirements.

⁴ Street widths must comply with life safety requirements for fire and emergency vehicle access.

Describe actions taken or justification/alternative:		
There is no landscape design planned and approximately 89 percent of the site will remain pervious.		
Use natural drainage systems.		
Yes X	No	
Describe actions taken or justification/alternative:		
Natural drainage systems shall be used to the greatest extent possible, given the intended usage of the site.		
Where soils conditions are suitable, use perforated pipe or gravel filtration pits for low flow infiltration. ⁵		
Yes	No X	
Describe actions taken or justification/alternative:		
Native soils at the project site provide good infiltration; hence there is no need for under drains or gravel pits.		
Construct onsite ponding areas, rain gardens, or retention facilities to increase opportunities for infiltration, while being cognizant of the need to prevent the development of vector breeding areas.		
Yes	No X	
Describe actions taken or justification/alternative:		
On-site ponding areas, rain gardens, or retention facilities are not required, given that the water is not drained toward an impaired water body.		
2. Minimize Directly Connected Impervious Areas		
Where landscaping is proposed, drain rooftops into adjacent landscaping prior to discharging to the storm drain.		
Yes	No X	
Describe actions taken or justification/alternative:		
There is no landscape design planned.		
Where landscaping is proposed, drain impervious sidewalks, walkways, trails, and patios into adjacent landscaping.		
Yes	No X	

⁵ However, projects must comply with hillside grading ordinances that limit or restrict infiltration of runoff. Infiltration areas may be subject to regulation as Class V injection wells and may require a report to the USEPA. Consult the Agency for more information on use of this type of facility.

Describe actions taken or justification/alternative: There is no landscape design planned for project.		
Increase the use of vegetated drainage swales in lieu of underground piping or imperviously lined swales.		
Yes	No X	
Describe actions taken or justification/alternative: Not Applicable.. Runoff will sheet flow, no planned use of concrete swales or underground storm drain.		
Use one or more of the following:		
Yes	No	Design Feature
		Rural swale system: street sheet flows to vegetated swale or gravel shoulder, curbs at street corners, culverts under driveways and street crossings
		Urban curb/swale system; street slopes to curb; periodic swale inlets drain to vegetated swale/bio-filter.
		Dual drainage system: First flush captured in street catch basins and discharged to adjacent vegetated swale or gravel shoulder, high flows connect directly to municipal storm drain systems.
X		Other comparable design concepts that are equally effective:
Describe actions taken or justification/alternative: Developed areas shall drain to the proposed drainage channels at the project site; undeveloped areas shall utilize natural drainage pattern.		
Use one or more of the following features for design of driveways and private residential parking areas: N/A		
Yes	No	Design Feature
		Design driveways with shared access, flared (single lane at street) or wheel strips (paving only under tires); or, drain into landscaping prior to discharging to the municipal storm drain system.
		Uncovered temporary or guest parking on private residential lots may be paved with a permeable surface; or designed to drain into landscaping prior to discharging to the municipal storm drain system.
		Other comparable design concepts that are equally effective.
Describe actions taken or justification/alternative:		

The project is not a typical commercial or residential development, thus these BMPs are not applicable. The facility would be unmanned, and brief site visits would utilize internal access roads for temporary parking. Therefore a dedicated parking lot is considered unnecessary.

Use one or more of the following design concepts for the design of parking areas: N/A

Yes	No	Design Feature
		Where landscaping is proposed in parking areas, incorporate landscape areas into the drainage design.
		Overflow parking (parking stalls provided in excess of the Agency's minimum parking requirements) may be constructed with permeable paving.
X		Other comparable design concepts that are equally effective.

Describe actions taken or justification/alternative:

The facility would be unmanned. Brief site visits during O&M would utilize internal access roads for temporary parking. A dedicated parking lot is considered unnecessary.

3.2 Source Control BMPs

Table 3-2, Source Control BMPs lists BMPs that are applicable to most projects. BMPs with a check mark have been selected to be implemented for this project. Where a required Source Control BMP is not applicable to the project due to project characteristics, justification and/or alternative practices for preventing pollutants have been provided in Table 3-3

Table 3-2 Source Control BMP Selection Matrix*

Project Category	Source Control BMPs																			
	<i>Education of Property Owners</i>	<i>Activity Restrictions</i>	<i>Spill Contingency Plan</i>	<i>Employee Training/Education Program</i>	<i>Street Sweeping Private Street and Parking Lots</i>	<i>Common Areas Catch Basin Inspection</i>	<i>Landscape Planning (SD-10)</i>	<i>Hillside Landscaping</i>	<i>Roof Runoff Controls (SD-11)</i>	<i>Efficient Irrigation (SD-12)</i>	<i>Protect Slopes and Channels</i>	<i>Storm Drain Signage (SD-13)</i>	<i>Inlet Trash Racks</i>	<i>Energy Dissipaters</i>	<i>Trash Storage Areas (SD-32) and Litter Control</i>	<i>Fueling Areas (SD-30)</i>	<i>Air/Water Supply Area Drainage</i>	<i>Maintenance Bays and Docks (SD-31)</i>	<i>Vehicle Washing Areas (SD-33)</i>	<i>Outdoor Material Storage Areas (SD-34)</i>
Significant Re-development																				
Home Subdivisions of 10 or More Units																				
Commercial/Industrial Development >100,000 ft²	X	X		X							X				X					
Automotive Repair Shop																				
Restaurants																				
Hillside Development >10,000 ft²																				
Development of impervious surface >2,500 ft²																				
* Provide justification of each Source control BMP that will not be incorporated in the project WQMP, or explanation of proposed equally effective alternatives in the following table.																				

Table 3-3 Justification for Source Control BMPs not Incorporated into the Project WQMP

Source Control BMP	Used in Project (Yes / No)?	Justification / Alternative*	Implementation Description
Education of Property Owners	Yes		
Activity Restrictions	Yes		
Spill Contingency Plan	No	No hazardous materials handled.	
Employee Training/Education Program	Yes		
Street Sweeping Private Street and Parking Lots	No	N/A	
Common Areas Catch Basin Inspection	No	N/A	
Landscape Planning (SD-10)	No	No landscape design planned	
Hillside Landscaping	No	No landscape design planned	
Roof Runoff Controls (SD-11)	No	No roof planned	
Efficient Irrigation (SD-12)	No	No irrigation system	
Protect Slopes and Channels	Yes		
Storm Drain Signage (SD-13)	No	No storm drainage system.	
Inlet Trash Racks	No	No riser device in basin planned	
Energy Dissipaters	No	No energy dissipaters planned	
Trash Storage Areas (SD-32) and Litter Control	Yes		
Fueling Areas (SD-30)	No	No fuel areas planned	
Air/Water Supply Area Drainage	No	No air/water supply area drainage planned	
Maintenance Bays and Docks (SD-31)	No	No Maintenance Bays and Docks planned	
Vehicle Washing Areas (SD-33)	No	No vehicle washing areas planned	
Outdoor Material Storage Areas (SD-34)	No	No outdoor material storage area planned	
Outdoor Work Areas (SD-35)	No	No outdoor work areas planned	
Outdoor Processing Areas (SD-36)	No	No outdoor processing areas planned	
Wash Water Controls for Food Preparation Areas	No	No food preparation areas planned	
Pervious Pavement (SD-20)	No	Majority of surface to remain unpaved	
Alternative Building Materials (SD-21)	No	N/A	
*Attach additional sheets if necessary for justification			

3.3 3.3 Treatment Control BMPs (Not required for Non-Category Projects)

There are no significant pollutants of concern as the runoff from this site does not discharge to an impaired waterbody. Thus Treatment Control BMPs listed in Table 3-4 are not applicable to this project, thus none has been selected.

Table 3-4 Treatment Control BMP Selection Matrix⁶

Pollutant of Concern	Treatment Control BMP Categories							
	Biofilters	Detention Basins ⁷	Infiltration Basins ⁸	Wet Ponds or Wetlands	Filtration	Water Quality Inlets	Hydrodynamics Separator Systems ⁹	Manufactured / Proprietary Devices
Sediment/Turbidity	H/M	M	H/M	H/M	H/M	L	H/M (L for turbidity)	U
Yes / No?								
Nutrients	L	M	H/M	H/M	L/M	L	L	U
Yes / No?								
Organic Compounds	U	U	U	U	H/M	L	L	U
Yes / No?								
Trash & Debris	L	M	U	U	H/M	M	H/M	U
Yes / No?								
Oxygen Demanding Substances	L	M	H/M	H/M	H/M	L	L	U
Yes / No?								
Bacteria & Viruses	U	U	H/M	U	H/M	L	L	U
Yes / No?								
Oils & Grease	H/M	M	U	U	H/M	M	L/M	U
Yes / No?								

⁶ Cooperative periodic performance assessment may be necessary. This Treatment Control BMP table will be updated as needed and as knowledge of stormwater treatment BMPs improves.

⁷ For detention basins with minimum 36-48 hour drawdown time.

⁸ Including trenches and porous pavement.

⁹ Also known as hydrodynamic devices and baffle boxes.

Pesticides (non-soil bound)	U	U	U	U	U	L	L	U
Yes / No?								
Metals	H/M	M	H	H	H	L	L	U
Yes / No?	yes							
<p>L: Low removal efficiency M: Medium removal efficiency H: High removal efficiency U: Unknown removal efficiency</p> <p>Biofilters include grass swales, grass strips, wetland vegetation swales, and bioretention. Detention Basins include extended/dry detention basins with grass lining and extended/dry detention basins with impervious lining. Infiltration Basins include infiltration basins and infiltration trenches. Wet Ponds and Wetlands include wet ponds (permanent pool) and constructed wetlands. Filtration Systems include media filtration and sand filtration. Water Quality Inlets include trapping catch basins and oil water separators. Hydrodynamics Separation Systems include swirl concentrators and cyclone separators. Manufactured/Proprietary Devices include other proprietary stormwater treatment devices as listed I the CASQA BMP Handbook and effective stormwater BMPs not specifically listed in this WQMP and/or newly developed treatment devices – treatment efficiencies are unknown but must be determined if proposed in the WQMP.</p>								

Sources: Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters (1993), National Stormwater Best Management Practices Database (2001), and Guide for BMP Selection in Urban Developed Areas (2001), California Stormwater BMP Handbook – New Development and Redevelopment (2003).

3.4. BMP Design Criteria

The following Treatment Control BMP(s) (Flow Based or Volume Based), shown in Table 3-5 will be implemented for this project (check "Implemented" box, if used):

Table 3-5 Treatment Control BMPs

Implemented	Treatment Control BMP	Design Basis
	Vegetated Buffer Strips	Flow Based
	Vegetated Swale	
	Multiple Systems	
	Manufactured/Proprietary	
	Bioretention	Volume Based
	Wet Pond	
	Constructed Wetland	
	Extended Detention Basin	
	Water Quality Inlet	
	Retention/Irrigation	
	Infiltration Basin	
	Infiltration Trench	
	Media Filter	
	Manufactured/Proprietary	

The above listed treatment control BMPs are not applicable to this project, as the runoff from the site does not drain toward an impaired water body.

SECTION 4

Operation and Maintenance

4.1. Operation and Maintenance

Operation and maintenance (O&M) requirements for all Source Control, Site Design, and Treatment Control BMPs are identified within this WQMP.

4.1.1. O&M Description and Schedule

The facility would be unmanned with minimal amount of pollutants of concern. An O&M for BMPs is considered unnecessary. Several part-time employees would visit the site occasionally (e.g., monthly or bi-monthly) on an as-needed basis and every three to six months employees or a contractor would visit the site to wash the PV panels. Security patrols will be arranged as needed. Also, following major storm events, O&M personnel may visit the site to ensure no major debris has accumulated at the site as a result of the storm event. It should also be noted that the perimeter of the property will be fenced with a six foot chain link fence topped with one foot of barbed wire, thus making it difficult for debris to accumulate on the property except on along fencelines. Debris accumulated along the fencelines will be cleared during routine O&M visits.

4.1.2. Inspection & Monitoring

Based on the analysis presented in this report, no BMPs are specifically needed for the site upkeep, thus there is no need to carry out rigid inspections and monitoring to ensure the BMPs are functioning. However, regular maintenance would be carried out at least semiannually to ensure that debris accumulated at the site following storm events are cleared.

4.1.3. Identification of Responsible Parties that must:

The party responsible for each BMP O&M is:

Agincourt Solar, LLC or successors
P.O. Box 31159
Santa Barbara, CA 93130
Phone: (805) 798-7698

Elliott MacDougall, Vice President

SECTION 5

Funding

3.4 5.1. Funding

The Permit requires that for all Treatment Control BMPs, a funding source or sources for operation and maintenance of each BMP, be identified within the WQMP. Funding for the O&M of this project will be provided by:

Agincourt Solar, LLC or successors
P.O. Box 31159
Santa Barbara, CA 93130
Phone: (805) 798-7698

Elliott MacDougall, Vice President

SECTION 6

WQMP Certification

3.5 6.1. Certification

- The applicant is required to sign and certify that the WQMP is in conformance with State Water Resources Control Board Order Number 2003-005-DWQ (NPDES Permit No. CAS000004).
- The applicant is required to sign and date the following statement ‘word-for-word’ certifying that the provisions of the WQMP have been accepted by the applicant, and that the applicant will have the plan transferred to future successors (transferability statement). The certification must be signed by the property owner, unless a written designation by the owner allows a designee to sign on the owner’s behalf.

“This Water Quality Management Plan has been prepared for (Owner/Developer Name) by (Consulting /Engineering Firm Name). It is intended to comply with the requirements of the City of (name city or county) for Tract/Parcel Map No. _____, Condition Number(s) _____ requiring the preparation of a Water Quality Management Plan (WQMP). The undersigned is aware that Best Management Practices (BMPs) are enforceable pursuant to the City’s/County’s Water Quality Ordinance No. 3587. The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the Phase II permit and the intent of the water quality regulations applicable to for San Bernardino County areas within the Colorado River Basin Region. Once the undersigned transfers its interest in the property, its successors in interest and the city/county shall be notified of the transfer. The new owner will be informed of its responsibility under this WQMP. A copy of the approved WQMP shall be available on the subject site in perpetuity. “

“I certify under a penalty of law that the provisions (implementation, operation, maintenance, and funding) of the WQMP have been accepted and that the plan will be transferred to future successors.”

Applicant’s Signature

Date

Applicant’s Name

Applicant’s Telephone Number

Attachment A-1

Maintenance Mechanisms

A-1.1 O&M Plan Required

The State Water Quality Control Board shall not accept stormwater structural BMPs as meeting the WQMP requirements standard, unless an O&M Plan is prepared (see WQMP Section 2.6) and a mechanism is in place that will ensure ongoing long-term maintenance of all structural and non-structural BMPs. This mechanism can be provided by the Agency or by the project proponent. As part of project review, if a project proponent is required to include interim or permanent structural and non-structural BMPs in project plans, and if the Agency does not provide a mechanism for BMP maintenance, the Agency shall require that the applicant provide verification of maintenance requirements through such means as may be appropriate, at the discretion of the Agency, including, but not limited to covenants, legal agreements, maintenance agreements, conditional use permits and/or funding arrangements (OC 2003)

A-1.2 Maintenance Mechanisms

1. **Public entity maintenance:** The Agency may approve a public or acceptable quasi-public entity (e.g., the County Flood Control District, or annex to an existing assessment district, an existing utility district, a state or federal resource agency, or a conservation conservancy) to assume responsibility for operation, maintenance, repair and replacement of the BMP. Unless otherwise acceptable to individual Agencies, public entity maintenance agreements shall ensure estimated costs are front-funded or reliably guaranteed, (e.g., through a trust fund, assessment district fees, bond, letter of credit or similar means). In addition, the Permittees may seek protection from liability by appropriate releases and indemnities.

The Agency shall have the authority to approve stormwater BMPs proposed for transfer to any other public entity within its jurisdiction before installation. The Permittee shall be involved in the negotiation of maintenance requirements with any other public entities accepting maintenance responsibilities within their respective jurisdictions; and in negotiations with the resource agencies responsible for issuing permits for the construction and/or maintenance of the facilities. The Agency must be identified as a third party beneficiary empowered to enforce any such maintenance agreement within their respective jurisdictions.

2. **Project proponent agreement to maintain stormwater BMPs:** The Agency may enter into a contract with the project proponent obliging the project proponent to maintain, repair and replace the stormwater BMP as necessary into perpetuity. Security or a funding mechanism with a “no sunset” clause may be required.
3. **Assessment districts:** The Agency may approve an Assessment District or other funding mechanism created by the project proponent to provide funds for

stormwater BMP maintenance, repair and replacement on an ongoing basis. Any agreement with such a District shall be subject to the Public Entity Maintenance Provisions above.

4. **Lease provisions:** In those cases where the Agency holds title to the land in question, and the land is being leased to another party for private or public use, the Agency may assure stormwater BMP maintenance, repair and replacement through conditions in the lease.
5. **Conditional use permits:** For discretionary projects only, the Agency may assure maintenance of stormwater BMPs through the inclusion of maintenance conditions in the conditional use permit. Security may be required.
6. **Alternative mechanisms:** The Agency may accept alternative maintenance mechanisms if such mechanisms are as protective as those listed above.

Attachment A-2



INSTRUCTIONS FOR COMPLETING THE WATER QUALITY MANAGEMENT PLAN (WQMP) TRANSFER, ACCESS, AND MAINTENANCE AGREEMENT

In order for your project to receive approval, you will need to prepare a WQMP and Stormwater Best Management Practices Transfer, Access and Maintenance Agreement (Maintenance Agreement). ***Please contact the Department of Public Works, Environmental Management Division after the final WQMP is approved, and at least ten (10) business days prior to your project's construction being completed, to receive the current Maintenance Agreement template. You can contact the Environmental Management Division by phone, by calling (909) 387 – 8109, or by email, at evarga@dpw.sbcounty.gov.*** The Maintenance Agreement shall be completed and approved according to the procedure outlined below, and must include the following information and attachments:

1. Provide all written information requested in the Maintenance Agreement template, including project and property owner's signature(s).
2. Attach a legal description of the project location, as well as a legal description of the locations of where all proposed storm water Best Management Practices will be constructed / installed, including a listing of the applicable Assessor's Parcel Numbers (APN). This page will be labeled as "EXHIBIT A, LEGAL DESCRIPTION".
3. Attach an 8.5" x 11" or 8.5" x 14" sized project plan sheet (labeled as "EXHIBIT B, BMP SITE PLAN"), illustrating the proposed stormwater Best Management Practices and maintenance / access points. Cross sections and other pertinent details of such measures shall also be included. (Plan should be legible)
4. Attach a completed Notary page, with notary's wet seal affixed, **and having the following statement inserted on the Notary page:**

"FOR: Maintenance Agreement, dated _____, for the project known as _____
(APN _____), as described in the WQMP
dated _____."

5. Attach a copy of the cover sheet for the most current WQMP that was approved. The cover sheet must display the information that is requested in the most current WQMP Guidance and Template document. Please visit the Environmental Management Division's website for the current WQMP Guidance and Template document (http://www.sbcounty.gov/dpw/land/environmental_mgmt.asp).
6. The completed Maintenance Agreement (along with attachments) shall be submitted for review to:

Department of Public Works

Environmental Management Division
825 E. Third Street, Room 201
San Bernardino, CA 92415-0835

7. Staff at the Environmental Management Division will review the Maintenance Agreement, and request any necessary changes.
8. When the Maintenance Agreement has been approved, the project and property owner(s) must sign the Maintenance Agreement and have his / her signature notarized.
9. The Maintenance Agreement will then be returned to the Environmental Management Division, where appropriate staff will obtain the notarized signature of the Director of Public Works (this may take up to ten (10) business days, depending on the Director's schedule and availability of the notary). Please provide a telephone number where you can be reached when the Maintenance Agreement is ready to be picked up for you to record.

Please Note: The Director of Public Works will not sign the Maintenance Agreement until the proposed Best Management Practices, as documented in the project WQMP, are constructed / installed, and all outstanding charges and invoices are paid.

10. The fully executed Maintenance Agreement must now be recorded at the San Bernardino County Recorder's Office at:

222 W. Hospitality Lane (behind the Souplantation restaurant)
San Bernardino, CA 92415-0018

11. A photocopy of the final recorded Maintenance Agreement must be returned to the Environmental Management Division. You must also show the recorded Maintenance Agreement to the Land Development Division of the Department of Public Works, in order to receive their final approval on your project.

If during project construction, there are any field changes to the stormwater Best Management Practices and maintenance / access points proposed in the WQMP, then the WQMP must be revised and re-submitted for approval by the County, and a new Maintenance Agreement must also be completed and re-submitted for approval by the County, according to the procedure outlined above.

If you have any further questions about this process, please call the Environmental Management Division, County Stormwater Program, at (909) 387-8109.

RECORDING REQUESTED BY:

County of San Bernardino
Department of Public Works

AND WHEN RECORDED MAIL TO:

County of San Bernardino
Department of Public Works
825 E. Third Street, Room 201
San Bernardino, CA 92415-0835

SPACE ABOVE THIS LINE FOR RECORDER'S USE

AGREEMENT

THIS PAGE ADDED TO PROVIDE ADEQUATE SPACE FOR
RECORDING INFORMATION (Additional Recording Fees Apply)

Water Quality Management Plan and Stormwater Best Management Practices
Transfer, Access and Maintenance Agreement

OWNER NAME: Agincourt Solar LLC

PROPERTY ADDRESS: The proposed project is situated in the western Mojave Desert, in the southern Lucerne Valley region of San Bernardino County. The site is about 5.5 miles southeast of the Lucerne Valley community. The primary access point to the project site is from Camp Rock Road, which runs along the eastern boundary of the site. Camp Rock Road intersects State Route (SR) 18, approximately 1.7 miles south of the proposed project site. The proposed project site includes the following APNs:

- 0449-61-04 (40 acres, NE/4 of NW/4, Section 34, Township 4N, Range 1E)
- 0449-641-27 (39.2 acres, S/2 of N/2 of NE/4, Section 34, Township 4N, Range 1E, excepting County 50-foot road easement)

APN: 0449-61-04 and 0449-641-27

THIS AGREEMENT is made and entered into in

_____, California, this _____ day of

_____, by and between

_____, hereinafter

referred to as Owner, and the COUNTY OF SAN BERNARDINO, a municipal corporation, located in the County of San Bernardino, State of California, hereinafter referred to as County;

WHEREAS, the Owner owns real property ("Property") in the County of San Bernardino, State of California, more specifically described in Exhibit "A" and depicted in Exhibit "B", each of which exhibits is attached hereto and incorporated herein by this reference;

WHEREAS, at the time of initial approval of development project known as

_____ within the Property described herein, the County required the project to employ Best Management Practices, hereinafter referred to as "BMPs," to minimize pollutants in urban runoff;

WHEREAS, the Owner has chosen to install and/or implement BMPs as described in the Water Quality Management Plan, on file with the County, hereinafter referred to as "WQMP",

to minimize pollutants in urban runoff and to minimize other adverse impacts of urban runoff;

WHEREAS, said WQMP has been certified by the Owner and reviewed and approved by the County;

WHEREAS, the Owner is aware that periodic and continuous maintenance, including, but not necessarily limited to, filter material replacement and sediment removal, is required to assure peak performance of all BMPs in the WQMP and that, furthermore, such maintenance activity will require compliance with all Local, State, or Federal laws and regulations, including those pertaining to confined space and waste disposal methods, in effect at the time such maintenance occurs;

NOW THEREFORE, it is mutually stipulated and agreed as follows:

1. All maintenance or replacement of BMPs proposed as part of the WQMP is the sole responsibility of the Owner in accordance with the terms of this Agreement.
2. Owner hereby provides the County of San Bernardino's designee complete access, of any duration, to the BMPs and their immediate vicinity at any time, upon reasonable notice, or in the event of emergency, as determined by the County Director of Public Works, no advance notice, for the purpose of inspection, sampling, testing of the Device, and in case of emergency, to undertake all necessary repairs or other preventative measures at owner's expense as provided in paragraph 3 below. The County shall make every effort at all times to minimize or avoid interference with Owner's use of the Property. Denial of access to any premises or facility that contains WQMP features is a violation of the County Stormwater Ordinance, County Code 3587. If there is reasonable cause to believe that an illicit discharge or breach of the WQMP operation and maintenance commitments is occurring on the premises then the authorized enforcement agency may seek issuance of a search warrant from any court of competent jurisdiction in addition to other enforcement actions.
3. Owner shall use its best efforts diligently to maintain all BMPs in a manner assuring peak performance at all times. All reasonable precautions shall be exercised by Owner and Owner's representative or contractor in the removal and extraction of any material(s) from the BMPs and the ultimate disposal of the material(s) in a manner consistent with all relevant laws and regulations in effect at the time. As may be requested from time to time by the County, the Owner shall provide the County with documentation identifying the material(s) removed, the quantity, and disposal destination.
4. In the event Owner, or its successors or assigns, fails to accomplish the necessary maintenance contemplated by this Agreement, within five (5) days of being given written notice by the County, the County is hereby authorized to cause any maintenance necessary to be done and charge the entire cost and expense against the property and/or to the Owner or Owner's successors or assigns, including administrative costs, attorney's fees and interest thereon at the maximum rate authorized by the County Code from the date of the notice of expense until paid in full.
5. The County may require the owner to post security in form and for a time period satisfactory to the County to guarantee the performance of the obligations stated herein. Should the Owner fail to perform the obligations under the Agreement, the County may,

in the case of a cash bond, act for the Owner using the proceeds from it, or in the case of a surety bond, require the sureties to perform the obligations of the Agreement. As an additional remedy, the Director of Public Works may withdraw any previous stormwater-related approval with respect to the property on which BMPs have been installed and/or implemented until such time as Owner repays to County its reasonable costs incurred in accordance with paragraph 3 above.

6. This agreement shall be recorded in the Office of the Recorder of San Bernardino County, California, at the expense of the Owner and shall constitute notice to all successors and assigns of the title to said Property of the obligation herein set forth, and also a lien in such amount as will fully reimburse the County, including interest as herein above set forth, subject to foreclosure in event of default in payment.
7. In event of legal action occasioned by any default or action of the Owner, or its successors or assigns, then the Owner and its successors or assigns agree(s) to hold the County harmless and pay all costs incurred by the County in enforcing the terms of this Agreement, including reasonable attorney's fees and costs, and that the same shall become a part of the lien against said Property.
8. It is the intent of the parties hereto that burdens and benefits herein undertaken shall constitute covenants that run with said Property and constitute a lien there against.
9. The obligations herein undertaken shall be binding upon the heirs, successors, executors, administrators and assigns of the parties hereto. The term "Owner" shall include not only the present Owner, but also its heirs, successors, executors, administrators, and assigns. Owner shall notify any successor to title of all or part of the Property about the existence of this Agreement. Owner shall provide such notice prior to such successor obtaining an interest in all or part of the Property. Owner shall provide a copy of such notice to the County at the same time such notice is provided to the successor.
10. Time is of the essence in the performance of this Agreement.
11. Any notice to a party required or called for in this Agreement shall be served in person, or by deposit in the U.S. Mail, first class postage prepaid, to the address set forth below. Notice(s) shall be deemed effective upon receipt, or seventy-two (72) hours after deposit in the U.S. Mail, whichever is earlier. A party may change a notice address only by providing written notice thereof to the other party.
12. The Owner its successors and assigns, hereby agrees to save and hold harmless the County, any of its departments, agencies, officers or employees, all of whom while working within their respective authority, from all cost, injury and damage incurred by any of the above, and from any other injury or damage to any person or property whatsoever, any of which is caused by an activity, condition or event arising out of the performance, preparation for performance or nonperformance of any provision of this agreement by the Owner, its agents, or any of its independent contractors.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IF TO COUNTY:

IF TO OWNER:

Director of Public Works _____

825 E. Third Street, Room 201 _____

San Bernardino, CA 92415-0835 _____

IN WITNESS THEREOF, the parties hereto have affixed their signatures as of the date first written above.

OWNER:

Signature: _____

Name: _____

Title

OWNER:

Signature: _____

Name: _____

Title

NOTARIES ON FOLLOWING PAGE

A notary acknowledgement is required for recordation (attach appropriate acknowledgement).

ACCEPTED BY:

GERRY NEWCOMBE, Director of Public Works

Date: _____

Attachment: Standard Notary Acknowledgement

Attachment B

Tables

B-1.1 303(d) List

Table B-1 303(d) List of Impaired Water Bodies									
Waterbody	Pollutant								
	Bacteria / Viruses (Pathogens)	Metals	Nutrients	Noxious Aquatic Plants	Sedimentation/Siltation	Total Suspended Solids (TSS)	PCBs (polychlorinated biphenyls)	Chemical oxygen demand (COD)	pH

B-1.2 C-Value

Table B-2 C Values Based on Impervious / Pervious Area Ratios		
% Impervious	% Pervious	C
0	100	0.15
5	95	0.19
10	90	0.23
15	85	0.26
20	80	0.30
25	75	0.34
30	70	0.38
35	65	0.41
40	60	0.45
45	55	0.49
50	50	0.53
55	45	0.56
60	40	0.60
65	35	0.64
70	30	0.68
75	25	0.71
80	20	0.75
85	15	0.79
90	10	0.83
95	5	0.86
100	0	0.90

NOTE:

Obtain individual runoff coefficient C-Factors from the local agency or from the local flood control district.

If C-Factors are not available locally, obtain factors from hydrology text books or estimate using this table.

Composite the individual C-Factors using area-weighted averages to calculate the Composite C Factor for the area draining to a treatment control BMP.

Do not use the C-Factors in this table for flood control design or related work.

Attachment C

Pollutants of Concern

C-1.1 Pollutants List

- ***Bacteria and Viruses*** – Bacteria and Viruses are ubiquitous microorganisms that thrive under certain environmental conditions. Their proliferation is typically caused by the transport of animal or human fecal wastes from the watershed. Water, containing excessive bacteria and viruses, can alter the aquatic habitat and create a harmful environment for humans and aquatic life. Also, the decomposition of excess organic waste causes increased growth of undesirable organisms in the water.
- ***Metals*** – The primary source of metal pollution in stormwater is typically commercially available metals and metal products. Metals of concern include cadmium, chromium, copper, lead, mercury, and zinc. Lead and chromium have been used as corrosion inhibitors in primer coatings and cooling tower systems. Metals are also raw material components in non-metal products such as fuels, adhesives, paints, and other coatings. At low concentrations naturally occurring in soil, metals may not be toxic. However, at higher concentrations, certain metals can be toxic to aquatic life. Humans can be impacted from contaminated groundwater resources, and bioaccumulation of metals in fish and shellfish. Environmental concerns, regarding the potential for release of metals to the environment, have already led to restricted metal usage in certain applications (OC 2003).
- ***Nutrients*** – Nutrients are inorganic substances, such as nitrogen and phosphorus. Excessive discharge of nutrients to water bodies and streams causes eutrophication, where aquatic plants and algae growth can lead to excessive decay of organic matter in the water body, loss of oxygen in the water, release of toxins in sediment, and the eventual death of aquatic organisms. Primary sources of nutrients in urban runoff are fertilizers and eroded soils.
- ***Pesticides*** - Pesticides (including herbicides) are chemical compounds commonly used to control nuisance growth or prevalence of organisms. Relatively low levels of the active component of pesticides can result in conditions of aquatic toxicity. Excessive or improper application of a pesticide may result in runoff containing toxic levels of its active ingredient (OC 2003).
- ***Polychlorinated Bi-Phenyls (PCB)*** - PCB are synthetic chemicals that were manufactured for use in various industrial and commercial applications - including oil in electrical and hydraulic equipment, and plasticizers in paints, plastics and rubber products - because of their non-flammability, chemical stability, high boiling point and electrical insulation properties. When released into the environment, PCBs do not easily break apart. Instead, they persist for many years, bioaccumulate and bioconcentrate in organisms. The EPA has classified PCBs as probable human carcinogens. Long-term effects of PCB exposure include

harm to the nervous and reproductive system, immune system suppression, hormone disruption and skin and eye irritation.

- **Organic Compounds** - Organic compounds are carbon-based. Commercially available or naturally occurring organic compounds are found in pesticides, solvents, and hydrocarbons. Organic compounds can, at certain concentrations, indirectly or directly constitute a hazard to life or health. When rinsing off objects, toxic levels of solvents and cleaning compounds can be discharged to storm drains. Dirt, grease, and grime retained in the cleaning fluid or rinse water may also adsorb levels of organic compounds that are harmful or hazardous to aquatic life (OC 2003).
- **Sediments** – Sediments are solid materials that are eroded from the land surface. Sediments can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms survival rates, smother bottom dwelling organisms, and suppress aquatic vegetation growth.
- **Total Suspended Solids (TSS)** - The measure of the suspended solids in a water sample includes inorganic substances, such as soil particles and organic substances, such as algae, aquatic plant/animal waste, particles related to industrial/sewage waste, etc. These solids can increase turbidity, clog fish gills, reduce spawning habitat, lower young aquatic organisms survival rates, smother bottom dwelling organisms, and suppress aquatic vegetation growth.
- **pH** – pH is an expression of hydrogen ion concentration in water. pH affects most chemical and biological processes in water, and it is one of the most important environmental factors limiting the distribution of species in aquatic habitats. Different species flourish within different ranges of pH, with the optima for most aquatic organisms falling between pH 6.5-8. U.S. EPA water quality criteria for pH in freshwater suggest a range of 6.5 to 9. Fluctuating pH or sustained pH outside this range reduces biological diversity in streams because it physiologically stresses many species and can result in decreased reproduction, decreased growth, disease, or death.
- **Trash and Debris** – Trash (such as paper, plastic, polystyrene packing foam, and aluminum materials) and biodegradable organic matter (such as leaves, grass cuttings, and food waste) are general waste products on the landscape. The presence of trash and debris may have a significant impact on the recreational value of a water body and aquatic habitat. Trash impacts water quality by increasing biochemical oxygen demand.
- **Oxygen-Demanding Substances** – This category includes biodegradable organic material as well as chemicals that react with dissolved oxygen in water to form other compounds. Proteins, carbohydrates, and fats are examples of biodegradable organic compounds. Compounds such as ammonia and hydrogen sulfide are examples of oxygen-demanding compounds. The oxygen demand of a substance can lead to depletion of dissolved oxygen in a water body and possibly the development of septic conditions. A reduction of dissolved

oxygen is detrimental to aquatic life and can generate hazardous compounds such as hydrogen sulfides.

- ***Oil and Grease*** – Oil and grease in water bodies decreases the aesthetic value of the water body, as well as the water quality. Primary sources of oil and grease are petroleum hydrocarbon products, motor products from leaking vehicles, esters, oils, fats, waxes, and high molecular-weight fatty acids.